



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

Environmental Epidemiology & Toxicology Division
Public Health Fact Sheet

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Prevalence of Multiple Sclerosis in Texas

What is MS?¹

Multiple sclerosis, or MS, is a chronic, unpredictable disease of the central nervous system (the brain and spinal cord). It is thought to be an autoimmune disorder, i.e., a condition in which the immune system incorrectly attacks a person's healthy tissue. In MS, the immune system attacks myelin, a layer that insulates the nervous system.

What are the symptoms of MS?

MS can cause problems that may be permanent or may come and go. Some of those problems are:

Blurred vision	Loss of balance
Poor coordination	Slurred speech
Tremors	Numbness
Extreme fatigue	Memory and concentration problems
Paralysis	Blindness

Who gets MS?¹

Anyone may develop MS, but there are some patterns.

- Studies suggest that genetic factors make certain people more at risk for MS than others, but there is no proof that MS is inherited.
- It occurs more often among people with northern European ancestry. People of African, Asian, and Hispanic backgrounds are also diagnosed with MS, but not as frequently.
- An estimated 400,000 Americans have MS.
- Most diagnoses are made in people between the ages of 20 and 50; about two-thirds of those diagnosed are women.

What causes MS?¹

No one knows the cause of MS. Research indicates that a number of factors are probably involved. The major scientific theories about MS suggest the following possible causes:

IMMUNOLOGICAL: MS involves an autoimmune process in which an abnormal immune response is directed against the central nervous system (CNS). The destruction of myelin (the fatty sheath that surrounds and insulates the nerve fibers) slows or halts nerve impulses and produces the symptoms of MS.

ENVIRONMENTAL: Exposure to some environmental agents encountered before puberty may predispose a person to develop MS later in life. People who are born in an area of the world associated with a high risk of MS and move to an area with a lower risk acquire the risk of their new location if the move occurs prior to adolescence.

VIRAL: We know some viruses cause demyelination and inflammation. It is possible that a virus that a person was exposed to in childhood could be the triggering factor in MS. There is no proof that any single virus triggers MS.

GENETIC: While MS is not hereditary, having a parent or sibling with MS increases an individual's risk of developing the disease. The increased risk can be many times higher than the risk for the general population.

Studies verify a higher prevalence of certain genes in populations with high rates of MS. Also, common genetic factors have been found in some families where there is more than one person with MS.

Recently, the Texas Department of State Health Services (DSHS) conducted a study of MS in Texas. Below are some questions and answers about our study and our findings.

Why was this study done?

This study was done because public health officials could not fully address concerns about the number of individuals with MS in several Texas communities. The number of individuals with MS in Texas was unknown.

What was the goal of this study?

The goal of this study was to develop timely and area-specific estimates for MS in Texas.

Where was this study done?

The study areas included El Paso County and the 19-county area surrounding Lubbock, Texas.

How was this study done?

We reviewed medical records from neurology offices that contained a code corresponding to multiple sclerosis.

We included records in our case count if these three conditions applied:

- Patient lived in either of the study areas;
- Patient had an office visit between January 1, 1998, and December 31, 2003; and
- A neurologist had diagnosed MS.

The information collected for each case included the patient's sex and race/ethnicity, and information on the treating doctor. Personal information such as name, address, and date of birth were also collected to make sure that each patient was counted only once.

What were the strengths of this study?

- **Geographic location** — Both of the study areas are relatively isolated, at least 100 miles from other major cities in Texas. This fact may have served to keep MS cases within the study areas for diagnosis and treatment.
- **Hispanic population** — For the first time in the United States, MS surveillance was conducted in a predominantly Hispanic population.
- **Timely prevalence estimates** — This study provided timely MS prevalence estimates (i.e., how many persons were estimated to be living with MS at this point in time) for Texas that included sex-, age-, and race/ethnicity-specific estimates.
- **Valuable information** — The prevalence estimates provide valuable information about the epidemiology of MS in Texas and allow for a comparison with national estimates.

What were the limitations of this study?

1. One private hospital in Lubbock and one neurologist in El Paso did not fully take part in the study. Therefore, the reported estimates are probably lower than the true prevalence in the study areas.
2. We found a large number of cases for which there was no identified race or ethnicity.

What were the results of this study?

The six-year MS prevalence estimate for the north Texas counties was 71.5 per 100,000 population (71.5/100,000) and for El Paso County was 49.4/100,000. For both areas, the female to male ratio was about 4 to 1. The prevalence of MS went up with age, was the highest in the 50–59 age group with a prevalence of 183.5/100,000. Prevalence went down for people over 60 years of age. Among ethnic groups non-Hispanic whites had the highest prevalence at 68.8/100,000.

Where can I get more information about this study?

For more information on the Texas MS study, you may contact principal investigator at the Texas DSHS:

Laurie Wagner, Principal Investigator
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Phone: 512-458-7269

Toll Free: 1-800-588-1248

Web: www.dshs.state.tx.us/epitox/

Where can I get more information about MS?

We advise talking to your doctor about MS if you have concerns about your health. If you would like more general information about MS, contact the National Multiple Sclerosis Society:

National Multiple Sclerosis Society
733 Third Avenue
New York, NY 10017

Toll Free: 1-800-Fight MS (1-800-344-4867)

Web: www.nmss.org

¹ The majority of the source material for this MS Q&A handout was adapted from the National MS Society web page at the address given above.

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